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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Junichi Takashima

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EXAMINER

RODEE, CHRISTOPHER D

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

12/31/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

Office Action Summary	Application No. 10/594,921	Applicant(s) TAKASHIMA ET AL.	
	Examiner Christopher RoDee	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Claim Objections***

Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 19 fails to further limit claim 1 because it contains the same limitations present in claim 1 for the container.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 2, 4-7, 9, 12-15, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,968,705 to Yamada *et al.* in view of JP 11-269204.

This rejection was presented in the last Office action. The instant claims have been amended to narrow the temperature ranges for the rate of heating in the claimed method. Specifically, the claims have the heating rate to the temperature lower than the target polymerization temperature by about 5 °C to a range of 25 to 50 °C/hr. Applicant has also amended the heating rate to the target polymerization temperature to a range of 10 to 20 °C/hr. See specification page 30.

A review of Yamada shows disclosure of corresponding steps raising the temperature of the dispersion at the rate of about 1 to about 20 °C an hour to a temperature lower than the target polymerization temperature by about 5 °C and a step of raising the temperature of the

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dispersion at the rate of about 3 to about 10 °C an hour to the target polymerization temperature. As is readily apparent, Yamada's use of the word "about" with respect to all aspects of the ranges indicates that some variance from the absolute numerical values present is permitted within the disclosure, teachings, and suggestions of the reference. With respect to heating from the temperature about 5 °C below the target polymerization to the to the target polymerization temperature, Yamada's upper heating range of about 10 °C/hr clearly suggests applicant's lower limit for this heating range of 10 °C/hr. The reference teaching of about 10 °C/hr encompasses not only a heating rate of about 10 °C, but also temperature rates within the relative values suggested by "about".

With respect to the to Yamada's heating to a temperature lower than the target polymerization temperature by about 5 °C, the suggestion of a heating rate of about 20 °C/hr would include values larger than 20 °C/hr because Yamada specifically chose to add the relative qualifier "about" to the heating range. A value of 25 °C/hr would be considered to be about 20 °C/hr to the skilled artisan. This is particularly the case when one considers the heating is from a temperature of lower than a target polymerization temperature by about 10 to about 40 °C to a temperature lower than the target polymerization temperature by about 5 °C. The amount of heating would be about 5 °C to about 35 °C (i.e., $10 - 5 = 5$; $40 - 5 = 35$). Heating 5 °C at a rate of about 20 °C/hr would take about 15 minutes. The instant claims require heating at 25 °C/hr and include within their scope the same heating difference as specified by Yamada. Heating the polymerizable liquid 5 °C at a rate of about 25 °C/hr would take 12 minutes. The artisan of ordinary skill in this art would see heating times of 12 minutes and about 15 minutes to be differences in design choice and, lacking objective evidence of an unexpected result, within the normal design modifications undertaken by the artisan. The number of variables is limited and the result of heating is predictable.

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In the response, applicant asserts that the newly claimed heating rates are not obvious over Yamada noting the specific examples presented in the document (see response pp. 10 & 11). However, the reference is not limited to its preferred teachings as asserted. Additionally, applicant asserts that the heating rates of the claims permit faster heating than in Yamada because the heating rates are greater. The Examiner does not find this argument probative because heating a material at a faster rate would necessarily result in less heating time. This is an obvious result for one of ordinary skill in the art, particularly given the high level of skill possessed by the artisans.

Applicant also traverses the rejection because the container used in Yamada is not that of the instant claims (See response p. 14). The Examiner recognized this fact in the first Office action and applied the supporting JP document. This document discloses a polymerization vessel having the characteristics required by the instant claims and would have been obvious to use for polymerization in Yamada's process for the reasons given in the last Office action. Applicant notes that the JP document uses the vessel for emulsion polymerization and has a silane-containing polymer coating while in the instant invention a corrosion-resistant metal container with a surface roughness R_y of 3 μm is used. A review of JP 11-269204 shows that it a polymerization container having an inner surface with a silane polymer coating and having a surface roughness (R_a) of 0.3 to 10 μm (§ [0008]). The container is made of SUS 304, which is a stainless steel (§ [0014]). Stainless steel is a corrosion resistant metal. This reactor prevents adhesion of material on the side of the reactor tank (§ [0002]). The JP reference discloses a container for polymerization in a liquid. This is the same need Yamada has in its reference. Although the JP document may prefer formation of latexes by emulsion polymerization, the reference is not limited to this embodiment. In any even, the tank serves the purpose of a polymerization vessel required by Yamada. The use a stainless steel reactor in the process of

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Yamada having a inner surface with a roughness within the range of the disclosure, such as 0.3 μm , would have been obvious because the JP '204 document teaches this reactor prevents adhesion of material on the sides of the reactor. The instant claims also do not exclude a polymeric coating on the container surface as may be asserted in the response.

New claim 19 is suggested by the art for the same reasons as given above noting that it appears to provide no further limitation to the claims than is present in claim 1.

In the response applicant also refers to the evidence in the specification as supporting patentability, but none of the comparative references present a comparison with the process of Yamada. Consequently, the evidence is not persuasive.

The rejection is still proper for the claims as amended and is maintained.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,968,705 to Yamada *et al.* in view of JP 11-269204 as applied to claims 1, 2, 4-7, 9, 12-15, 17, and 19 above, and further in view of JP 2003-287928.

This rejection was presented in the last Office action. Applicant is understood to traverse the rejection because the JP '928 document does not remedy the alleged deficiencies of Yamada and the JP '204 document with respect to accelerating the heating rate. This is not found persuasive because Yamada suggests heating rates to the skilled artisan that overlap with those claimed. The supporting JP '928 document is applied for its disclosure of using an aqueous polymerization liquid that is sprayed on the upper interior portion of the polymerization container (¶¶ [0074] – [0078]). This spray process reduces the formation of “scales” on the interior of the container during large scale production of toner (¶ [0010]). This reference is still seen as effectively combined with Yamada and JP '204 for this purpose.

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Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,968,705 to Yamada *et al.* in view of JP 11-269204 as applied to claims 1, 2, 4-7, 9, 12-15, 17, and 19 above, and further in view of JP 2003-277405.

Applicant traverses this rejection because the supporting reference is disclosed for use in emulsion polymerization while the instant claims are limited to suspension polymerization. The JP reference discloses a container for polymerization in a liquid. This is the same need Yamada has in its reference. Although the JP document may prefer formation of polymers by emulsion polymerization, the reference is not limited to this embodiment. In any even, the tank serves the purpose of a polymerization vessel required by Yamada. The use of a known polymerization tank for its known function is *prima facie* obvious to the skilled artisan.

Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,968,705 to Yamada *et al.* in view of JP 11-269204 as applied to claims 1, 2, 4-7, 9, 12-15, 17, and 19 above, and further in view of US Patent 5,958,640 to Hasegawa *et al.*

Applicant traverses this rejection as previously set forth because the reference does not disclose the process as claimed. This is not an effective traversal because specifics of why the combination of references is allegedly deficient have not been provided.

The rejection is still seen as proper and is maintained.

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Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher RoDee whose telephone number is 571-272-1388. The examiner can normally be reached on Monday to Thursday from 6:00 to 4:30 Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher RoDee/
Primary Examiner
Art Unit 1795

23 December 2009